**Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims**

1. (previously presented) A method to investigate properties of luminescence materials, comprising:

mechanically positively displacing ~~a~~ first luminescence material ~~precursor~~ precursors selected from the group consisting of $Y(NO_3)_3$, $Gd(NO_3)_3$, $Lu(NO_3)_3$, $Al(NO_3)_3$, $Ga(NO_3)_3$ and $Ce(NO_3)_3$ ~~having a viscosity greater than about 1 centipoise~~ with a plunger from a dispenser to a first position of ~~an~~ a combinatorial array plate, and mechanically positively displacing ~~a second~~ further luminescence material ~~precursor~~ precursors ~~with a plunger from a dispenser to a second position of an array~~ wherein at least one of the first luminescence material precursors is displaced within a linear dynamic range of from greater than 20 nano-liter to about 100 micro-liter; and

simultaneously reacting ~~said first and second~~ the luminescence material precursors to produce a first $(Y_xA_{1-x})_3(Al_yGa_{1-y})_5O_{12}:Ce^{3+}_{0.06}$(A: Gd, Lu), where $3 \geq x \geq 0.375$; $5 \geq y \geq 0.625$, library of candidate luminescence materials [wherein the first luminescence material precursor or the second luminescence material precursor is displaced within a linear dynamic range of from greater than 20 nano-liter to about 100 micro-liter];

determining wavelength and emission intensity of fluorescence of the first $(Y_xA_{1-x})_3(Al_yGa_{1-y})_5O_{12}:Ce^{3+}_{0.06}$(A: Gd, Lu) library of materials under an applied UV excitation; and

defining a next $(Y_xA_{1-x})_3(Al_yGa_{1-y})_5O_{12}:Ce^{3+}_{0.06}$(A: Gd, Lu) library of candidate luminescence materials according to the determined wavelength and emission intensity of the first $(Y_xA_{1-x})_3(Al_yGa_{1-y})_5O_{12}:Ce^{3+}_{0.06}$(A: Gd, Lu) library of materials.

2. (canceled)

3. (canceled).

4. (canceled)

5. (currently amended) The method of claim 1, comprising displacing said ~~first and second~~ precursors from respective hollow barrels by activating a plunger within each of said barrels.

6. (canceled)

7. (canceled)

8. (canceled)

9. (currently amended) The method of claim 1, wherein said at least one of the first precursors ~~precursor~~ is displaced within a linear dynamic range of from about 100 nano-liter to about 50 micro-liter.

10. (currently amended) The method of claim 1, comprising first aspirating ~~a~~ said ~~precursor~~ first luminescence material precursors into said dispenser.

11. (canceled)

12. (canceled)

13. (currently amended) The method of claim 10, wherein said ~~precursor is~~ first luminescence material precursors are aspirated into said dispenser within a linear dynamic range of from about 100 nano-liter to about 50 micro-liter.

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (original) The method of claim 1, wherein said precursors are highly viscous materials.

21. (canceled)

22. (canceled)

23. (original) The method of claim 1, wherein said precursors have a viscosity of greater than about 1 centipoise to about 100 centipoise.

24. (original) The method of claim 1, wherein said precursors comprise a solid in fluid suspension of a particle size of up to about 50μm.

25. (canceled)

26. (canceled)

27. (canceled)

28. (canceled)

29. (canceled)

30. (canceled)

31. (canceled)

32. (canceled)

33. (canceled)

34. (canceled)